ORDER NO. KM40212006C1
J01

Service Manual

Telephone Equipment

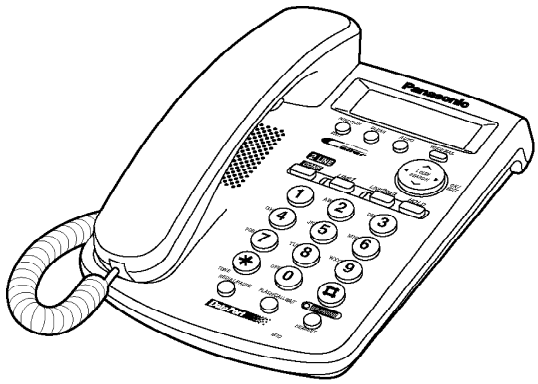
Data Port

Caller ID Compatible

2-LINE

KX-TSC14B

Integrated Telephone System
Black Version
(for U.S.A.)



SPECIFICATIONS

■ SPECIFICATIONS

Power Source:	AC Adaptor KX-TCA1-G (AC 120 V, 60 Hz)
Memory Capacity:	Informations of 50 different Callers.
Dial Speed:	Tone (DTMF) /Pulse (10 pps)
Redial:	The unit redials the last 5 dialed number.
Speaker:	Unit; 5.7 cm (2.5") PM magnetic type receiver unit, 32 Ω
	Handset; 3 cm ($1^{3}/_{16}$") PM magnetic type
Microphone:	Electret condenser microphone
Input Jacks:	DC IN, Telephone line $^{1}/_{2}$, Telephone line 2
Dimensions:	$6^{23}/_{32}$" × $3^{1}/_{2}$" × $8^{3}/_{4}$" [171 (w) × 89 (H) × 222 (D) mm]
Weight:	1.70 lbs. (770 g) with handset

Design and specifications are subject to change without notice.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

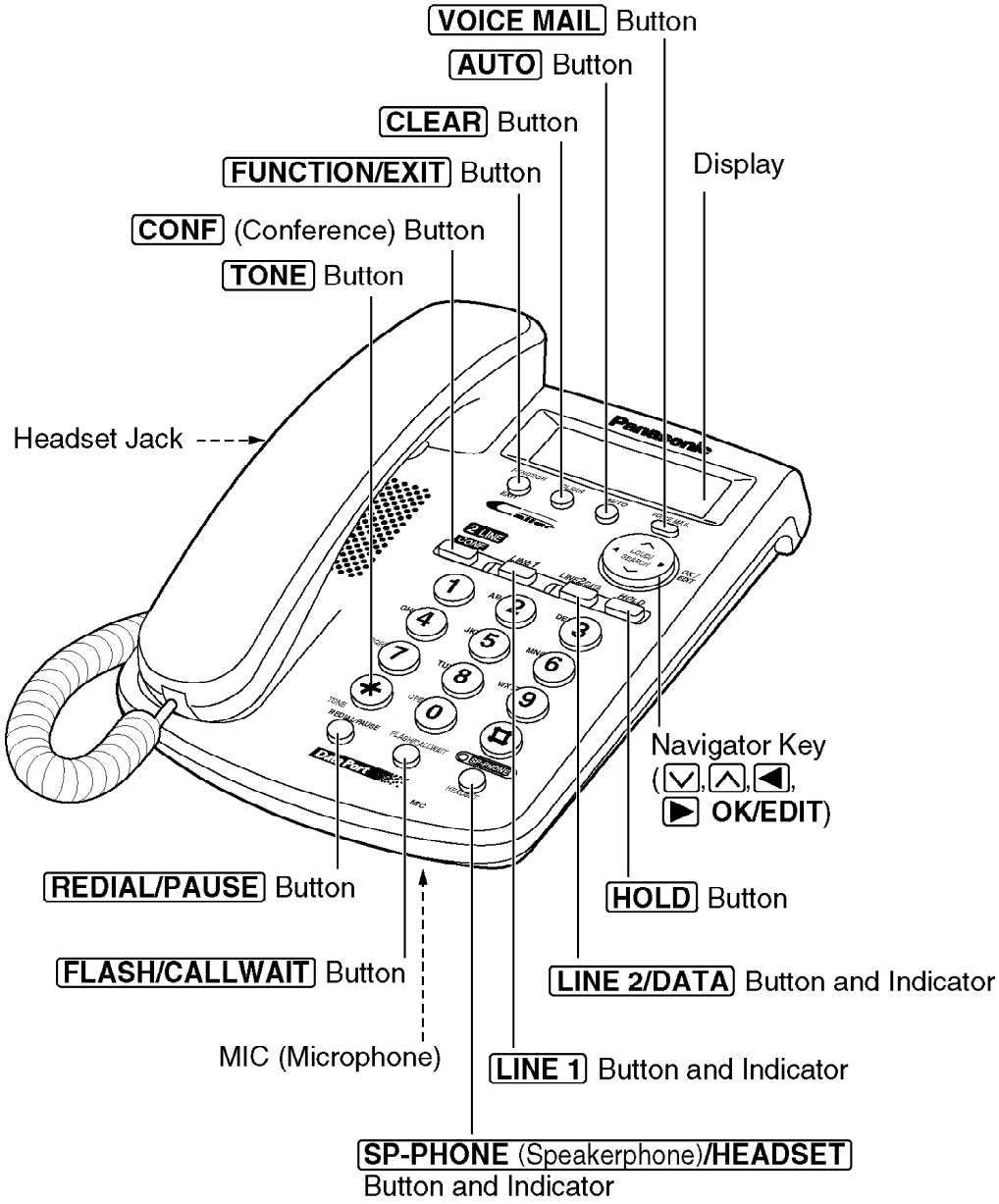
When you note the serial number, write down all 11 digits. The serial number may be found on the bottom of the unit.

FOR SERVICE TECHNICIANS

ICs and LSIs are vulnerable to static electricity.
When repairing, the following precautions will help prevent recurring malfunctions.
1. Cover plastic parts boxes with aluminum foil.
2. Ground the soldering irons.
3. Use a conductive mat on worktable.
4. Do not grasp IC or LSI pins with bare fingers.

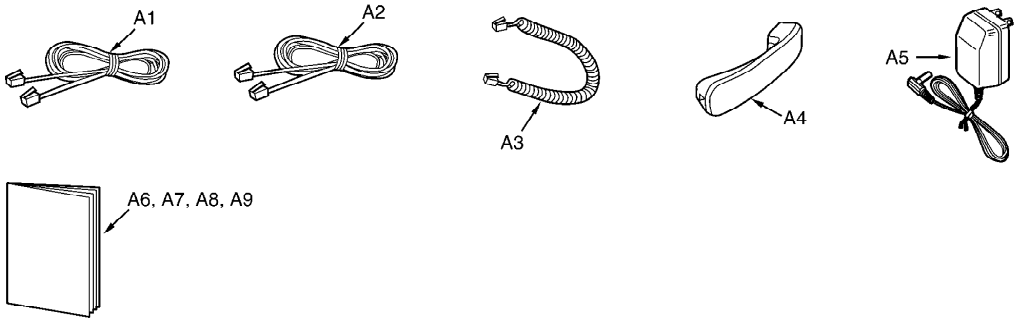
Panasonic

1. LOCATION OF CONTROLS



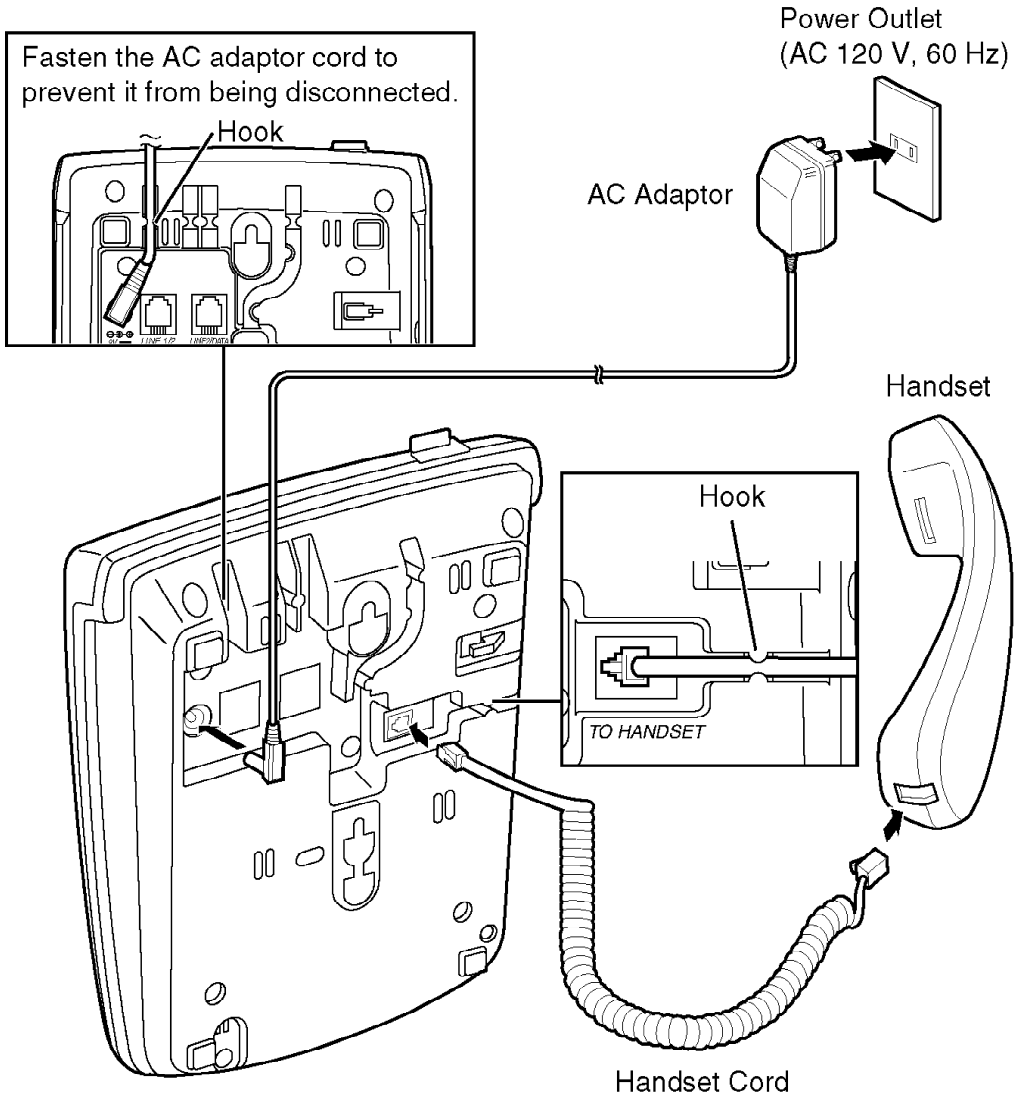
2. REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Pcs/Set	Rema
A1	PQJA10075Z	CORD, TELEPHONE (2 Wire)	1	
A2	PQJA10088Z	CORD, TELEPHONE (4 Wire)	1	
A3	PQJA10126X	CORD, HANDSET	1	
A4	PQJXE0401Z	HANDSET	1	
A5	KX-TCA1-G	AC ADAPTOR	1	⚠
A6	PQQW12318Z	QUICK GUIDE (for English)	1	
A7	PQQW12319Z	QUICK GUIDE (for Spanish)	1	
A8	PQQW12560Z	LEAFLET	1	
A9	PQQX12879Y	INSTRUCTION BOOK	1	



3. CONNECTION

3.1. Connecting the Handset/AC Adaptor



- USE ONLY WITH Panasonic AC ADAPTOR KX-TCA1 (Order No. KX-TCA1-G).

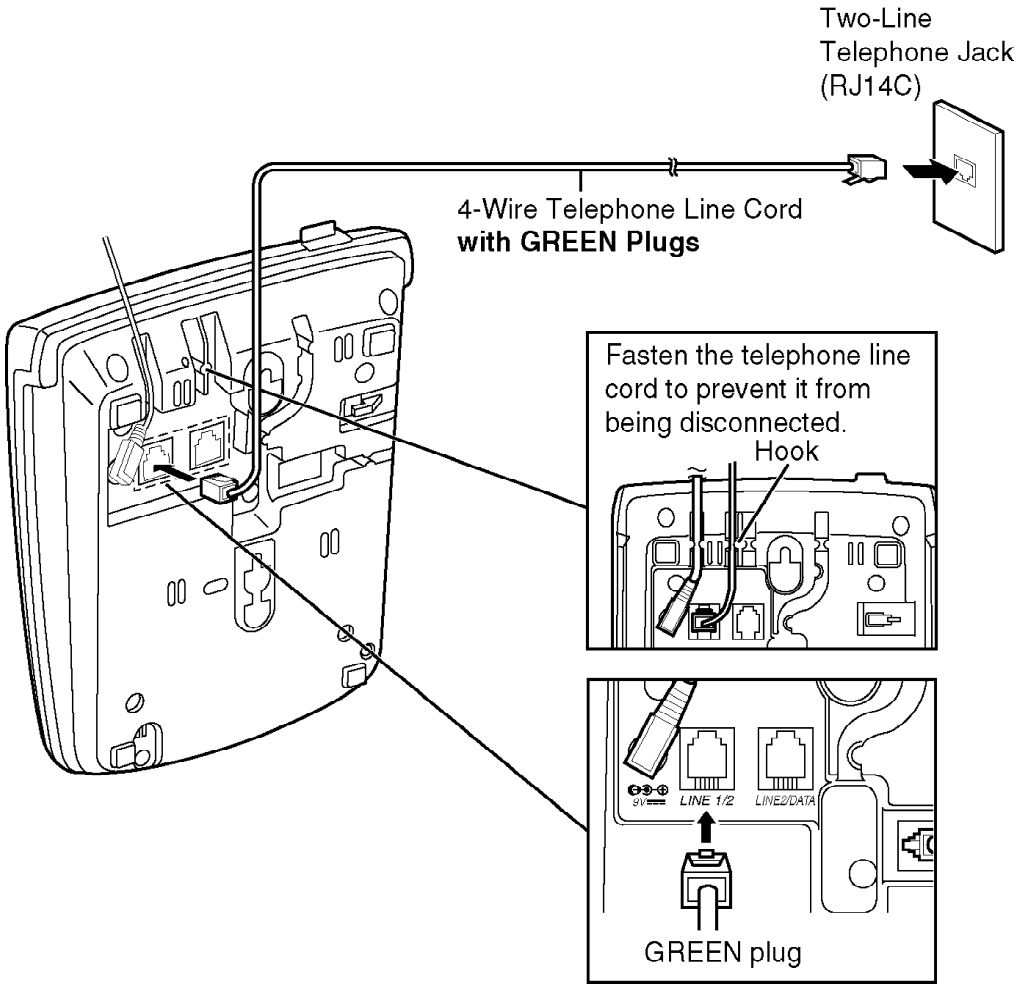
- Use only a Panasonic Handset for the KX-TSC14B.

- **The AC adaptor must remain connected at all times. (It is normal for the adaptor to feel warm during use.)**
- **During a power failure the unit will work as a standard telephone on the Line 1, but the following features will not work.**
  - **-Caller ID services**
  - **-speakerphone**
  - **-line indicators**
  - **-LCD display**

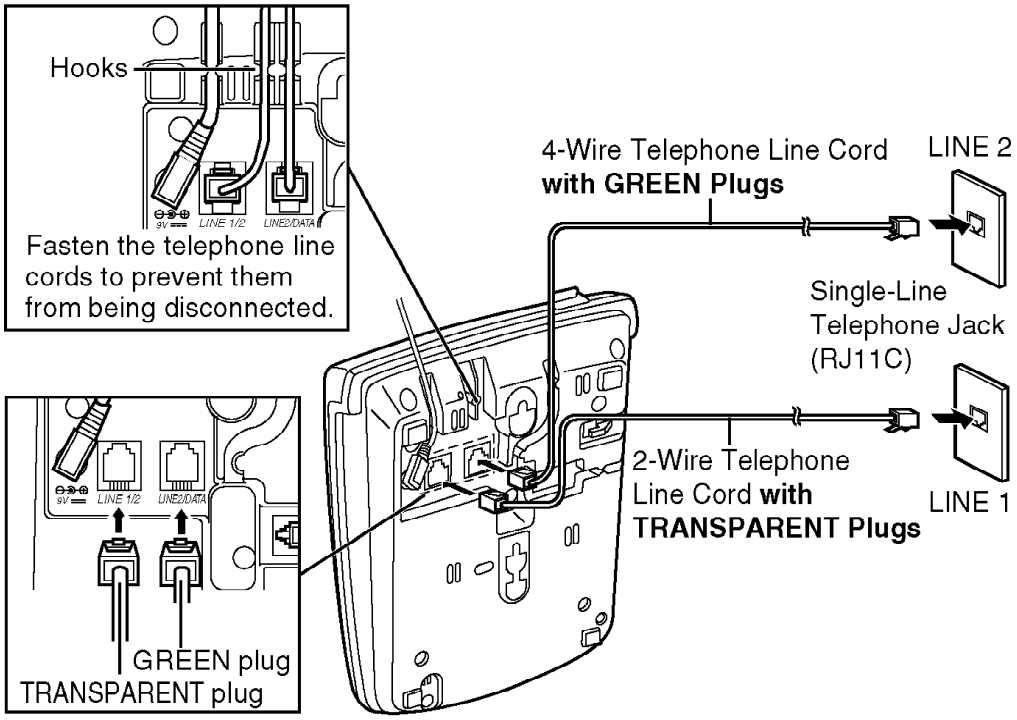
3.2. Connecting the Telephone Line Cord

Connect the telephone line cord(s) to the unit as follows.

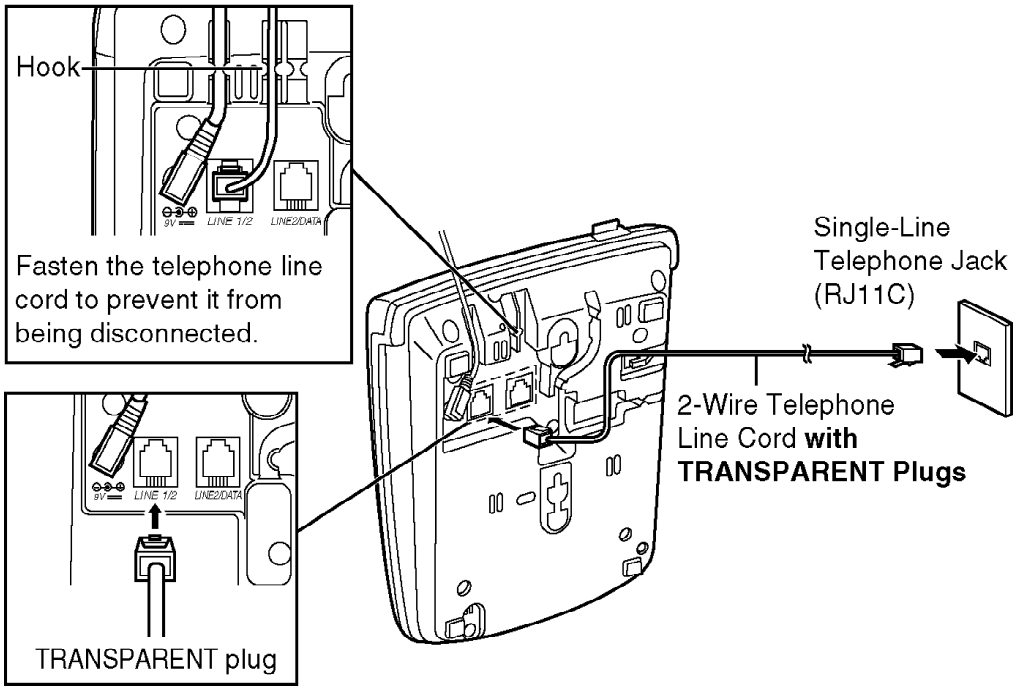
3.2.1. To connect a two-line telephone jack



3.2.2. To connect two single-line telephone jacks


Hooks
Fasten the telephone line cords to prevent them from being disconnected.
4-Wire Telephone Line Cord with GREEN Plugs
LINE 2
Single-Line Telephone Jack (RJ11C)
2-Wire Telephone Line Cord with TRANSPARENT Plugs
LINE 1
GREEN plug
TRANSPARENT plug

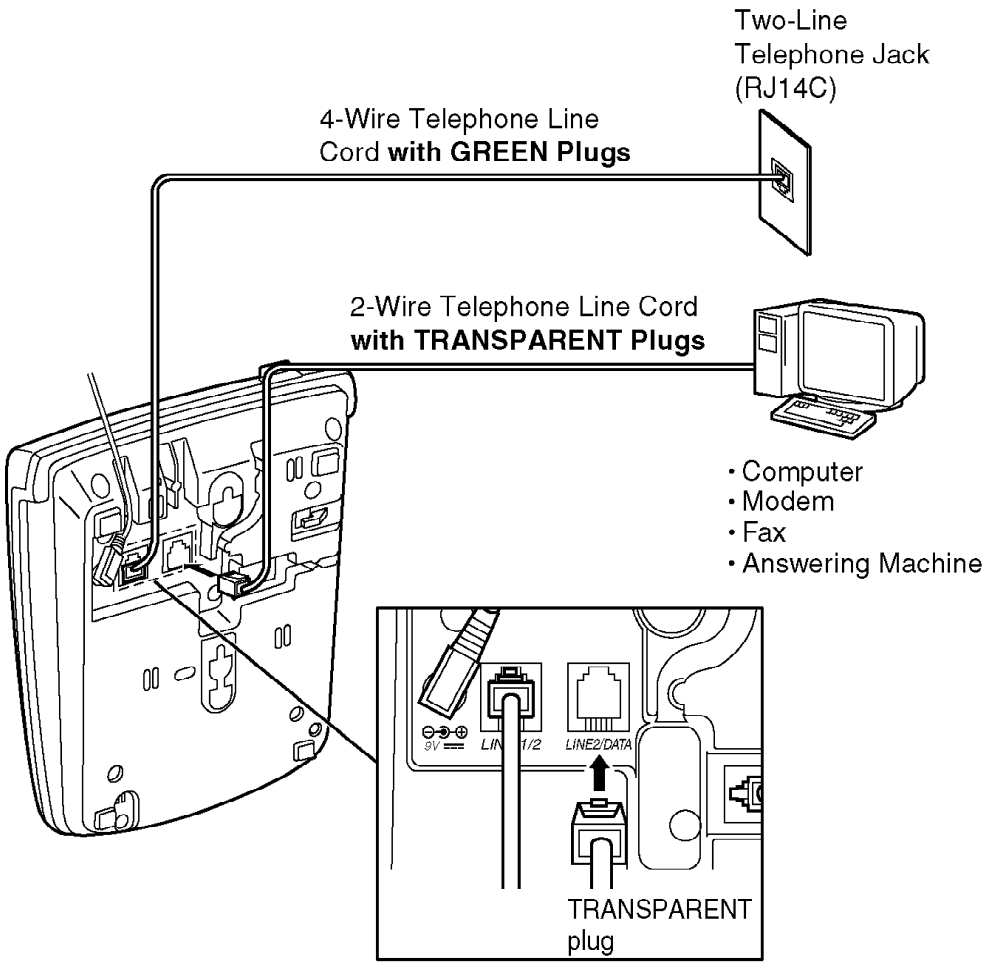
3.2.3. If you use the unit only as a single-line telephone


Hook
Fasten the telephone line cord to prevent it from being disconnected.
Single-Line Telephone Jack (RJ11C)
2-Wire Telephone Line Cord with TRANSPARENT Plugs
TRANSPARENT plug

- For this connection, you can only use LINE 1.

3.3. Connecting a Communication Device

After connecting the telephone line cord to a two-line telephone jack, you can connect a communication device (computer, modem, fax, answering machine, etc.) through this unit using the LINE 2/DATA jack (—Data Port).



- If the LINE 2/DATA indicator lights, the communication device is in use. Use LINE 1 to make a call. Otherwise the communication device may not operate properly.

4. FOR SCHEMATIC DIAGRAM

1. SW 1: Hook switch.

2. SW 2: Ringer selector.

3. DC voltage measurements are taken with electronic voltmeter from negative voltage line.

4. (Add 40 mA to telephone line from the loop simulator.)

5. Off-hook condition

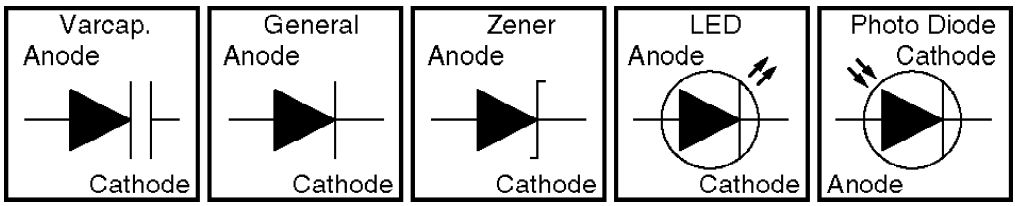
6. No Mack: Handset Mode

7. This schematic diagram may be modified at any time with the development of new technology.

8. The shades area on this schematic diagram incorporates special

features important for protection from fire and electrical shock hazards.

9. When servicing, it is essential that only manufacture's specified parts be used for the critical components in the shaded areas of the schematic.

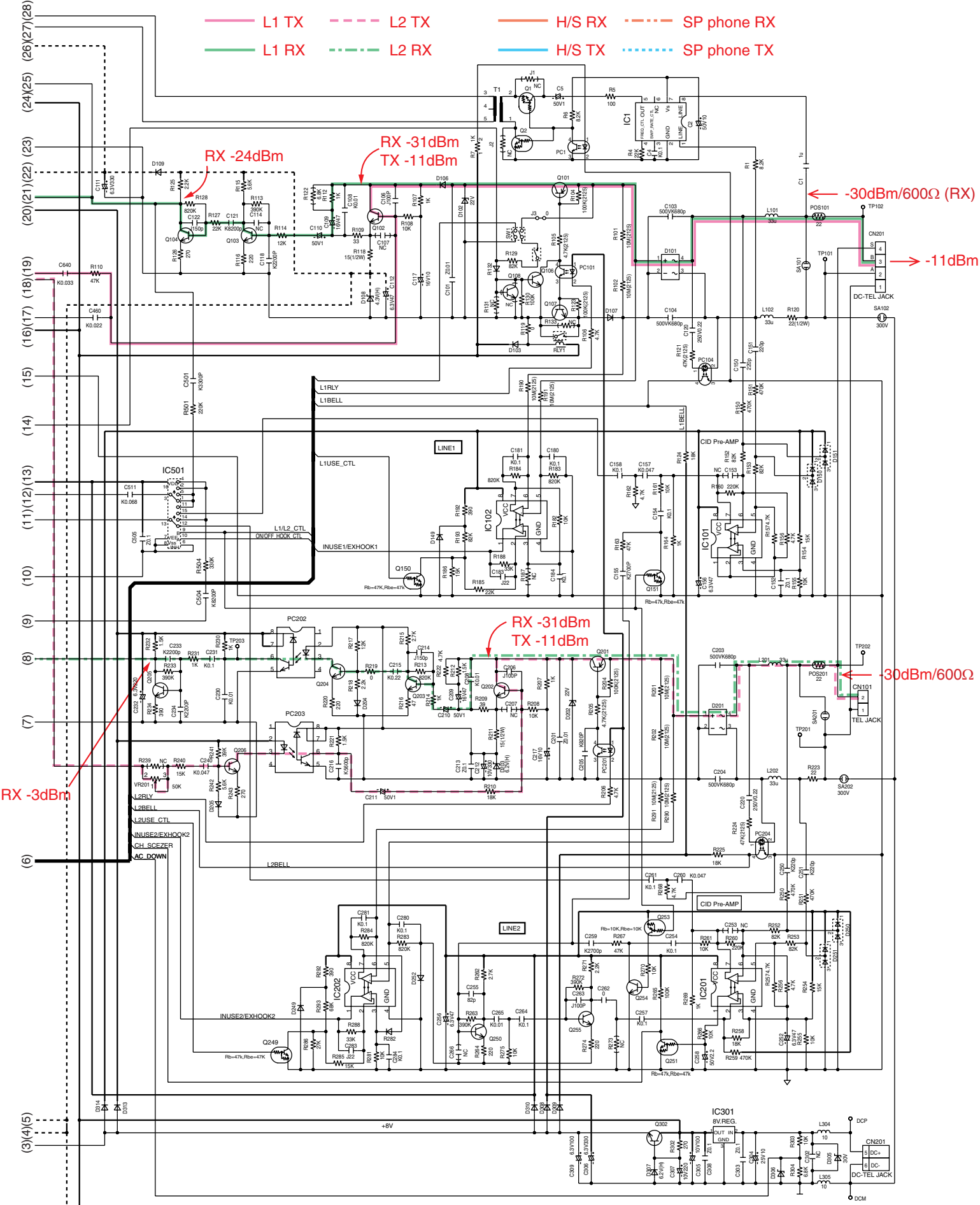


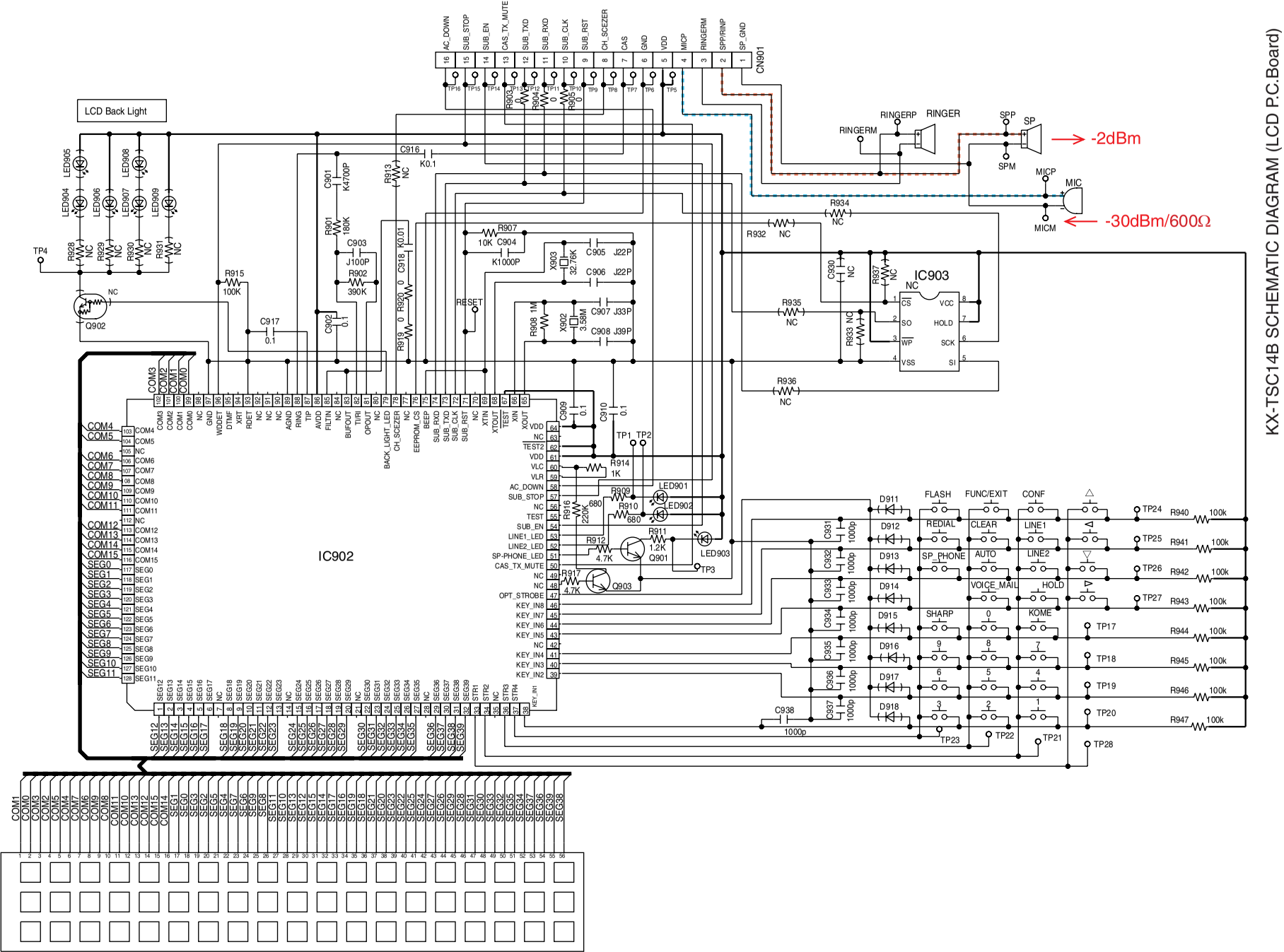
5. SCHEMATIC DIAGRAM

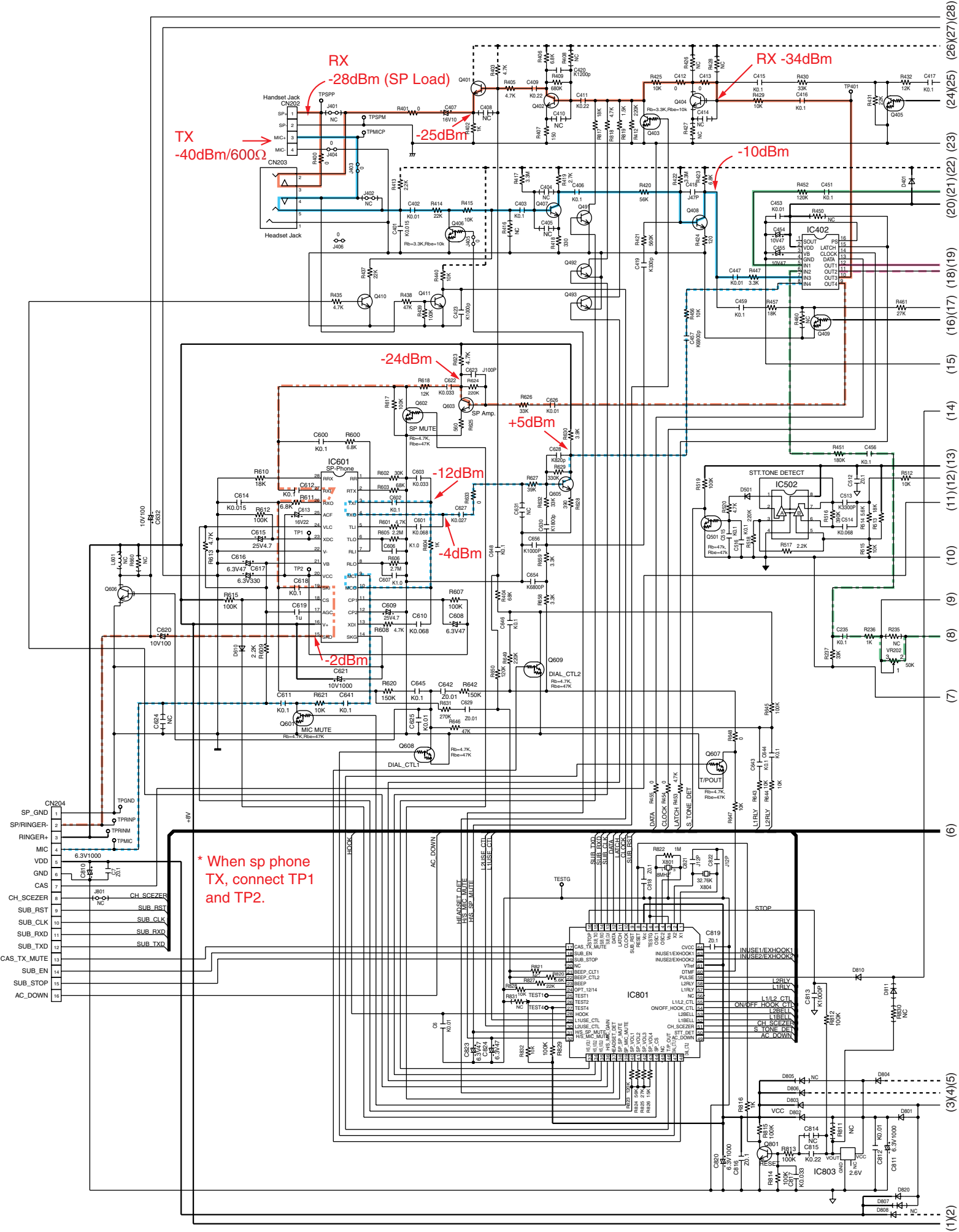
5.1. Main P.C. Board

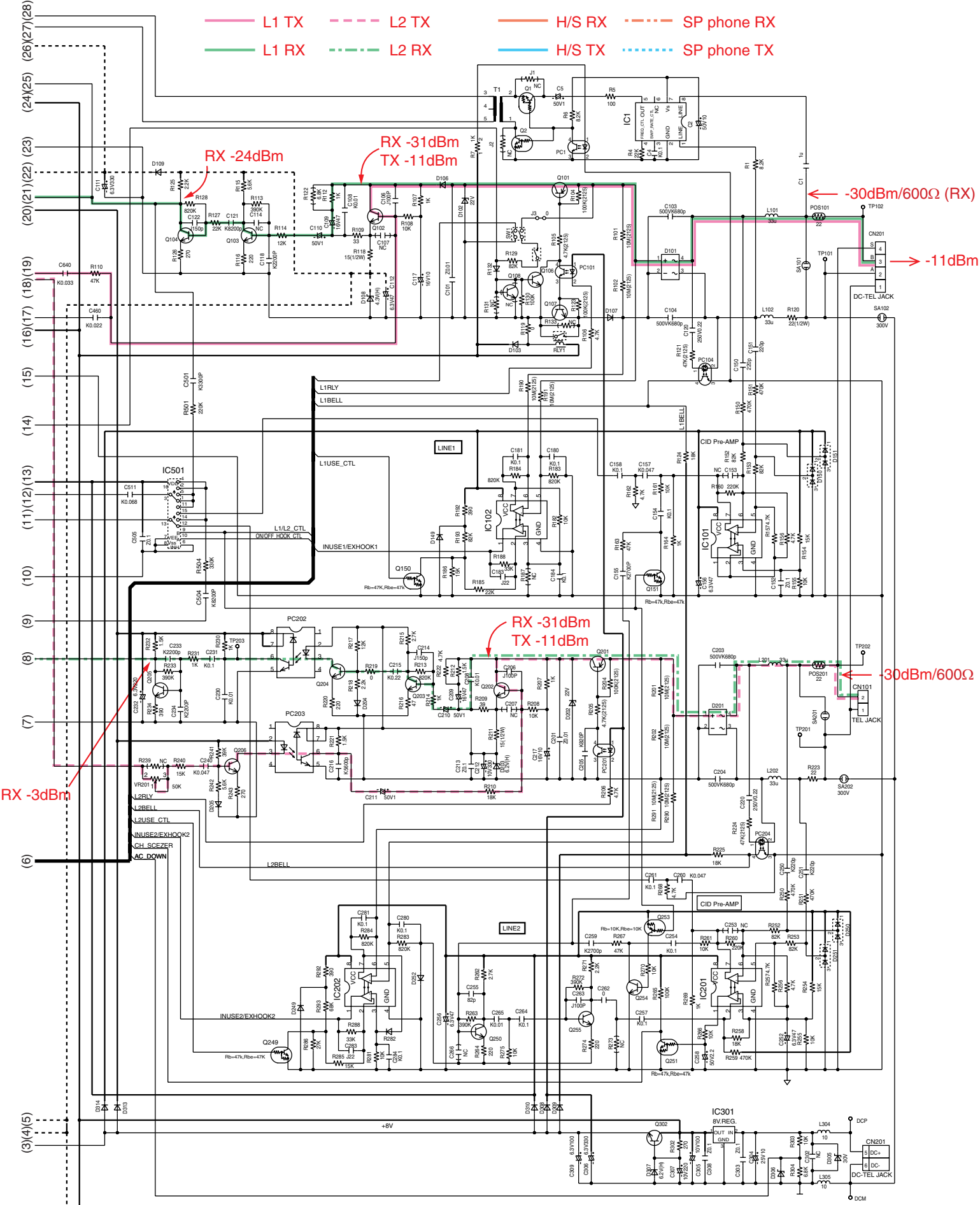
5.2. LCD P.C. Board

H.M / KXTSC14B


L1 TX
L2 TX
H/S RX
SP phone RX
L1 RX
L2 RX
H/S TX
SP phone TX
RX -24dBm
RX -31dBm
TX -11dBm
-30dBm/600Ω (RX)
-11dBm
-30dBm/600Ω
RX -3dBm
RX -31dBm
TX -11dBm
DC-TEL JACK
TEL JACK
CID Pre-AMP
LINE1
LINE2
L1RLY
L1BELL
L1USE_CTL
L1/L2_CTL
ON/OFF HOOK CTL
INUSE1/EXHOOK1
INUSE2/EXHOOK2
L2RLY
L2BELL
L2USE_CTL
CH_SCEZER
AC_DOWN
+8V
IC501
IC102
IC101
IC202
IC201
IC301
8V.REG.
PC202
PC203
PC204
PC101
PC104
PC201
Q150
Q151
Q249
Q250
Q251
Q253
Q254
Q255
Q302
Rb=47K,Rbe=47K
Rb=10K,Rbe=10K
KX-TSC14B SCHEMATIC DIAGRAM (Main P.C. Board)


KX-TSC14B SCHEMATIC DIAGRAM (LCD P.Board)
LCD Back Light
IC902
IC903
CN901
AC_DOWN
SUB_STOP
SUB_EN
CAS_TX_MUTE
SUB_TXD
SUB_RXD
SUB_CLK
SUB_RST
CH_SCEZER
CAS
GND
VDD
MICP
RINGERM
SPP/RINP
SP_GND
RINGERP
RINGER
SPP
SP
SPM
MIC
MICM
-2dBm
-30dBm/600Ω
RESET
FLASH
FUNC/EXIT
CONF
REDIAL
CLEAR
LINE1
SP_PHONE
AUTO
LINE2
VOICE_MAIL
HOLD
SHARP
KOME
LED901
LED902
LED903
Q901
Q902
Q903


RX
-28dBm (SP Load)
TX
-40dBm/600Ω
-25dBm
RX -34dBm
-10dBm
-24dBm
+5dBm
-12dBm
-4dBm
-2dBm
Handset Jack
CN202
Headset Jack
CN203
IC601
SP-Phone
IC402
IC502
STT.TONE DETECT
IC801
IC803
SP MUTE
SP Amp.
MIC MUTE
DIAL_CTL1
DIAL_CTL2
T/POUT
CN204
SP_GND
SP/RINGER-
RINGER+
MIC
VDD
GND
CAS
CH_SCEZER
SUB_RST
SUB_CLK
SUB_RXD
SUB_TXD
CAS_TX_MUTE
SUB_EN
SUB_STOP
AC_DOWN
* When sp phone TX, connect TP1 and TP2.


L1 TX
L2 TX
H/S RX
SP phone RX
L1 RX
L2 RX
H/S TX
SP phone TX
RX -24dBm
RX -31dBm
TX -11dBm
-30dBm/600Ω (RX)
-11dBm
-30dBm/600Ω
RX -3dBm
RX -31dBm
TX -11dBm
DC-TEL JACK
TEL JACK
CID Pre-AMP
LINE1
LINE2
L1RLY
L1BELL
L1USE_CTL
L1/L2_CTL
ON/OFF HOOK CTL
INUSE1/EXHOOK1
INUSE2/EXHOOK2
L2RLY
L2BELL
L2USE_CTL
CH_SCEZER
AC_DOWN
+8V
IC501
IC102
IC101
IC202
IC201
IC301
8V.REG.
PC202
PC203
PC204
PC101
PC104
PC201
Q150
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Q251
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Q254
Q255
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Rb=47K,Rbe=47K
Rb=10K,Rbe=10K
KX-TSC14B SCHEMATIC DIAGRAM (Main P.C. Board)